

CLAIMS

Claim 1. Oscillator circuit comprising:

- 5 an LC resonant circuit (1),
- an activating component (2) connected to the LC resonant circuit (1), which serves to compensate for the losses occurring in the LC resonant circuit (1), whereby the series-configuration of both the LC resonant circuit (1) and the activating component (2),
- 10 a current-defining element which connects the LC resonant circuit and the activating component, which sets the current flowing through the activating component (2), between a first voltage (VDD) and a second voltage (VSS), which is different from the first voltage (VDD), and
- wherein the current-defining element includes an ohmic resistance (R1) and
- 15 wherein the oscillator circuit furthermore comprises a control loop circuit, which serves to set the current flowing through the activating component (2) to a pre-determined constant value.

 Claim 2. Oscillator circuit according to Claim 1, wherein the control loop circuit

20 comprises a copy (3) of the activating component.

 Claim 3. Oscillator circuit according to Claim 1, wherein the control loop circuit furthermore comprises a reference current source (Iref), which is connected to the copy (3) of the activating component.

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Claim 4. Oscillator circuit according to Claim 1, wherein said oscillator circuit furthermore comprises an operational amplifier (4), to one of whose inputs is applied the voltage present at the activating component (2), and to whose other input is applied the voltage present at the copy of the activating component (3), and whose output signal
5 controls a transistor (5) that is connected in parallel to the series-connected control loop circuit, consisting of the LC resonant circuit (1) and the activating component (2).

Claim 5. Oscillator circuit according to Claim 1 wherein said oscillator circuit furthermore comprises a low-pass filter (C2, R2).

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Claim 6. Oscillator circuit as in Claim 1, wherein the ohmic resistor (R1) is integrated.

Claim 7. Oscillator circuit as in Claim 1, wherein the activating component
15 comprises the MOS FETs (6, 7).

Claim 8. Oscillator circuit according to claim 7, where the length of the gates of the MOS FETs (8, 9) of the copy (3) of the activating component is greater by a specific factor than the length of the gates of the MOS FETs (6, 7) of the activating component
20 (2).

Claim 9. Oscillator circuit as in Claim 1, wherein the reference current (I_{ref}) is lower by a specific factor than the current flowing through the resistor (R1).

Claim 10. Oscillator circuit as in Claim 1, wherein all circuit elements are in integrated form.

5 Claim 11. Oscillator circuit as in Claim 1, wherein the activating component (2) comprises a first MOS FET (6) and a second MOS FET (7), whose source terminals are each connected to the resistor, and whose drain terminals are each connected to the LC resonant circuit (1), whereby the gate terminal is in each case connected to the drain terminal of the corresponding other MOS FET.

10 Claim 12. Oscillator circuit as in Claim 1, wherein the first voltage is a supply voltage (VDD) and the second voltage is ground potential (VSS).

15 Claim 13. Oscillator circuit according to Claim 12, wherein the LC resonant circuit (1) is connected to the supply voltage (VDD), and the resistor (R1) is connected between the activating circuit and ground potential (VSS).